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ABSTRACT

The United States Training and Employment Service General Aptitude Test Battery (GATB), first published in 1947, has been included in a continuing program of research to validate the tests against success in many different occupations. The GATB consists of 12 tests which measure nine aptitudes: General Learning Ability; Verbal Aptitude; Numerical Aptitude; Spatial Aptitude; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, and a standard deviation of 20. Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, when combined, predict job performance. Cutting scores are set only for those aptitudes which aid in predicting the performance of the job duties of the experimental sample. The GATB norms described are appropriate only for jobs with content similar to that shown in the job description presented in this report. A description of the validation sample and a personnel evaluation form are also included. (AG)

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Development of USES Aptitude Test Battery for Hospital-Admitting Clerk

(medical ser.) 237.368

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U.S. DEPARTMENT OF LABOR
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MANPOWER ADMINISTRATION
BUREAU OF EMPLOYMENT SECURITY
Washington, D.C. 20210

Technical Report on Development of USES Aptitude Test Battery

For .....

HOSPITAL-ADMITTING CLERK (medical ser.) 237.368

S-393

U. S. Employment Service
in Cooperation with
California State Employment Service

February 1967

FOREWORD

The United States Employment Service General Aptitude Test Battery (GATB) was first published in 1947. Since that time the GATB has been included in a continuing program of research to validate the tests against success in many different occupations. Because of its extensive research base the GATB has come to be recognized as the best validated multiple aptitude test battery in existence for use in vocational guidance.

The GATB consists of 12 tests which measure 9 aptitudes: General Learning Ability, Verbal Aptitude, Numerical Aptitude, Spatial Aptitude, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity, and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, with a standard deviation of 20.

Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, in combination, predict job performance. For any given occupation, cutting scores are set only for those aptitudes which contribute to the prediction of performance of the job duties of the experimental sample. It is important to recognize that another job might have the same job title but the job content might not be similar. The GATB norms described in this report are appropriate for use only for jobs with content similar to that shown in the job description included in this report.

Frank H. Cassell

Frank H. Cassell, Director
U. S. Employment Service

DEVELOPMENT OF USES APTITUDE TEST BATTERY

For

Hospital-Admitting Clerk (medical ser.) 237.368
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This report describes research undertaken for the purpose of determining General Aptitude Test Battery (GATB) norms for the occupation of HOSPITAL-ADMITTING CLERK (medical ser.) 237.368. The following norms were established:

GATB Aptitudes	Minimum Acceptable GATB, B-1002 Scores
G - General Learning Ability	95
V - Verbal Aptitude	90
Q - Clerical Perception	90

RESEARCH SUMMARY

Sample:

59 female students enrolled in an MDTA class at Los Angeles Valley College in Van Nuys, California

Criterion:

Instructors' ratings based on a trainee Descriptive Rating Scale, SP-21

Design:

Longitudinal (test data were collected at beginning of training course and criteria were collected after the completion of the training course.)

Minimum aptitude requirements were determined on the basis of a job analysis and statistical analyses of aptitude mean scores, standard deviations, aptitude-criterion correlations, and selective efficiencies.

Predictive Validity:

Phi Coefficient = .50 ($P/2 < .0005$)

Effectiveness of Norms:

Only 68% of the non-test-selected students used for this study were good students; if the students had been test-selected with the above norms, 85% would have been good students. 32% of the non-test-selected students used for this study were poor students; if the students had been test-selected with the above norms, only 15% would have been poor students. The effectiveness of the norms is shown graphically in Table 1:

TABLE 1

Effectiveness of Norms

	Without Tests	With Tests
Good students	68%	85%
Poor students	32%	15%

SAMPLE DESCRIPTION

Size:

N = 59

Occupational Status:

Students

School Setting:

Students were enrolled in a 10-week MDTA training class at Los Angeles Valley College in Van Nuys, California.

School Selection Requirements:

Education: High school graduate

Previous Experience: None

Tests: None

Other: Personal interview

Principal Activities:

The job duties for which the sample was being trained are comparable to those shown in the job description in the Appendix.

Minimum Experience:

None required, but all applicants must have high school courses in business, typing, bookkeeping, filing, office practice, and a good background in English.

TABLE 2

Means, Standard Deviations (SD), Ranges, and Pearson Product-Moment Correlations with the Criterion (r) for Age and Education

	Mean	SD	Range	r
Age (years)	43.1	9.3	21 - 62	- .004
Education (years)	12.2	1.4	9 - 16	.203

EXPERIMENTAL TEST BATTERY

All 12 tests of the GATB, B-1002B were administered prior to the start of training during the period from January, 1965 through December, 1965.

CRITERION

The criterion data consisted of two instructors' ratings of classroom performance in two areas, clerical and medical. Both instructors rated each student approximately one week to ten days after the completion of the training program. Second ratings were obtained after a time interval of two weeks. Grades were collected and converted to numerical values ranging from one to nine. There were no significant correlations between grades and any of the aptitudes. Therefore, grades were discarded.

Rating Scale:

Adaptation of USES Form SP-21, "Descriptive Rating Scale" was used. The scale (see appendix) consisted of nine items covering different aspects of classroom performance. Each item has five alternates corresponding to different degrees of performance.

Reliability:

The coefficient of correlation between first and second ratings (two instructors' ratings combined) was .96 indicating satisfactory reliability The final criterion score consisted of the combined score of the four ratings.

Criterion Score Distribution:

Possible Range:	28 - 140
Actual Range:	60 - 139
Mean:	98.8
Standard Deviation:	21.4

Criterion Dichotomy:

The criterion distribution was dichotomized into low and high groups by placing 32% of the sample in the low group to correspond with the percentage of students considered unsatisfactory or marginal. Students in the high criterion group were designated as "good students" and those in the low group as "poor students." The criterion critical score is 87.

APTITUDES CONSIDERED FOR INCLUSION IN THE NORMS

Aptitudes were selected for tryout in the norms on the basis of a qualitative analysis of job duties involved and a statistical analysis of test and criterion data. Tables 3, 4, and 5 show the results of the qualitative and statistical analyses.

TABLE 3

Qualitative Analysis
(Based on the job analysis, the aptitudes indicated appear to be important to the work performed)

Aptitude	Rationale
G - General Learning Ability	Makes independent judgments and decisions regarding emergency diagnosis, treatment needed and giving out information concerning the condition of the patient.
V - Verbal Aptitude	Necessary to understand medical terminology and use English effectively when conversing with patients, visitors, and professional personnel.
Q - Clerical Perception	Necessary in performing clerical duties such as typing, billing, PBX relief, and establishing and completing records on patients.

TABLE 4

Means, Standard Deviations (SD), Ranges, and Pearson Product-Moment Correlations with the Criterion (r) for the Aptitudes of the GATB

Aptitude	Mean	SD	Range	r
G - General Learning Ability	100.9	14.4	71-133	.612**
V - Verbal Aptitude	109.1	13.8	78-145	.554**
N - Numerical Aptitude	95.2	15.6	61-132	.568**
S - Spatial Aptitude	96.7	13.2	68-127	.360**
P - Form Perception	94.1	12.4	67-118	.361**
Q - Clerical Perception	108.1	14.4	77-142	.306*
K - Motor Coordination	111.3	16.8	64-151	.254
F - Finger Dexterity	93.7	19.3	51-141	.075
M - Manual Dexterity	98.7	21.4	50-157	.126

*Significant at .05 level
**Significant at .01 level

TABLE 5

Summary of Qualitative and Quantitative Data

Type of Evidence	Aptitudes								
	G	V	N	S	P	Q	K	F	M
Job Analysis Data									
Important	x	x				x			
Irrelevant									
Relatively High Mean		x				x	x		
Relatively Low Standard Deviation	x	x		x	x	x			
Relatively High Correlation with Criterion	x	x	x	x	x	x			
Aptitudes to be Considered for Trial Norms	G	V	N	S	P	Q			

DERIVATION AND VALIDITY OF NORMS

Final norms were derived on the basis of a comparison of the degree to which trial norms consisting of various combinations of Aptitudes G, V, N, S, P, and Q at trial cutting scores were able to differentiate between the 68% of the sample considered good students and the 32% of the sample considered poor students. Trial cutting scores at five point intervals approximately one standard deviation below the mean are tried because this will eliminate about one-third of the sample with three-aptitude norms. The Phi Coefficient was used as a basis for comparing trial norms. Norms of G-95, V-90, Q-90 provided the optimum differentiation for the occupation of Hospital-Admitting Clerk (medical ser.) 237.368. The validity of these norms is shown in Table 6 and is indicated by a Phi Coefficient of .50 (statistically significant at the .0005 level).

TABLE 6

Predictive Validity of Test Norms, G-95, V-90, Q-90

	Nonqualifying Test Scores	Qualifying Test Scores	Total
Good students	7	33	40
Poor students	13	6	19
Total	20	39	59

Phi Coefficient (Ø) = .50 Chi Square (X^2) = 14.9

Significance Level = $P/2 < .0005$

DETERMINATION OF OCCUPATIONAL APTITUDE PATTERN

The data for this study met the requirements for incorporating the occupation studied into OAP-13 which is shown in Section II of the Manual for the General Aptitude Test Battery. The OAP-13 norms of G-100, V-90, Q-100 yield a Phi Coefficient of .29.

DESCRIPTIVE RATING SCALE FOR STUDENTS OR TRAINEES
(For Aptitude Test Development Studies)

NAME OF TRAINEE _____ SCORE _____

RATING OF CLASSROOM PERFORMANCE _____
(D.O.T. Title and Code)

1. How quickly does he grasp or learn new subject material which is introduced?

   ( ) Almost always need more time or repeated instruction.

   ( ) Frequently needs more time or repeated instruction.

   ( ) Learns most subject matter in an average amount of time.

   ( ) Seldom needs repeated instruction.

   ( ) Rarely, if ever, needs repeated instructions.

2. How large a variety of assignments (subjects) can he master which are expected at this stage of training?

   ( ) Masters very few assignments.

   ( ) Masters less than average variety of assignments.

   ( ) Masters about half of the assignments.

   ( ) Accomplishes most assignments.

   ( ) Masters almost all assigned subjects.

3. What is his understanding of the theory of the work for which he is receiving training (his understanding of what the work is, how it is done, and why)?

   ( ) Has very little knowledge of the principles and methods of the job.

   ( ) Has some knowledge of the principles and methods of the job.

   ( ) Has an average knowledge of the principles and methods of the job.

   ( ) Understands most of the principles and methods of the job.

   ( ) Understands all principles and methods of the job.

4. How often does he complete assignments in the time expected?

( ) Rarely meets expected time limits.

( ) Seldom completes assignments on time.

( ) Completes assignments on time more often than not.

( ) Rarely fails to meet expected time limits.

( ) Always complets assignments on time.

5. How often does he make errors in written tests or quizzes?

( ) Usually fails quiz or test.

( ) Frequently scores below average on quiz or test.

( ) Makes average grades on quiz or test.

( ) Scores above average on most quizzes and tests.

( ) Makes excellent scores on most quizzes or tests.

6. How often does he need special assistance in order to grasp or understand subject material?

( ) Constantly requires individual attention and assistance.

( ) Frequently requires individual attention and assistance.

( ) Occassionally needs individual attention and assistance.

( ) Usually understands subject material when presented to the group.

( ) Almost never needs individual attention or assistance.

7. How well does he apply himself to classroom instruction?

( ) Does not concentrate on instruction; slow to react.

( ) Difficult to hold his attention, is easily disrupted.

( ) Usually sticks to his studies.

( ) Easily maintains his attention; is seldom disrupted.

( ) Very serious about his work; constantly adheres to instruction.

8. How often does he contribute materially to classroom discussion?

   ( ) Never contributes to classroom discussion.

   ( ) Seldom contributes to classroom discussion.

   ( ) Contributes an average amount to classroom discussion.

   ( ) Frequently offers ideas and suggestions.

   ( ) Always offers constructive ideas and suggestions.

9. Considering only the factors rated above, how satisfactory is his school performance?

   ( ) One of the weakest students. Always behind the rest of the class.

   ( ) Occasionally lags behind the rest of the class.

   ( ) Manages to keep pace with the rest of the class.

   ( ) Usually does above average work.

   ( ) Learns rapidly and well; one of the best students in the class.

INSTRUCTOR _____ DATE _____

SCHOOL _____

February 1967

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FACT SHEET

Job Title: HOSPITAL-ADMITTING CLERK (medical ser.) 237.368

Job Summary: Performs a variety of clerical and nursing duties in hospital admitting office to make arrangements for admission of patients.

Work Performed: Accepts hospital reservations from Physicians and Patients: Checks list of Physicians approved by hospital administration to determine if Physician making reservation has right to use hospital facilities. Types, on admission sheet, information identifying Physician, patient, type of accommodation desired, insurance coverage, date of admission and type and date of operation if case is surgical in nature. Reviews list of unoccupied beds and makes pre-admission reservation according to type of case and accommodations desired. Receives diagnosis of patients condition as infectious, contagious, or benign, from Physician or hospital pre-admission card, completed and submitted by Physician, and enters information on admission sheet. Notifies all departments concerned with care, treatment, diagnosis, and record keeping of the admission of patients.

Admits patient: Greets and puts patient at ease. Takes patient's temperature, pulse, and respiration, as required. Administers first aid if patient's condition requires immediate treatment. Escorts patient, relative or friend to admitting office and seats at desk. Interviews patient to obtain identifying information, such as, name, address, age, occupation, race, health plan name and number and simultaneously types information on admission sheet. Accepts initial payment in absence of health plan or insurance coverage. Obtains signature on admission sheet, of individual responsible for payment of bill. Operates cash register and gives change. Receives valuables from patient and issues receipt. Places patient's valuables in safe until discharged or requested. Answers questions of patient, relatives or friends regarding visitors and visiting hours. Gives information to relative, patient or friend regarding charges, rates, discounts, billing, and other services offered. Assigns patient to room or ward, based on nature of illness and type of accommodations requested. Escorts or arranges to have patient escorted to appropriate room. Upon the request of the Physician notifies family when patient is placed on critical list. Answers inquiries of patient's family, friends, insurance companies and other agencies concerning patient's condition, in accordance with hospital regulations governing divulgence of such information. Upon request of Physician contacts police in connection with the admission of patients that requires a police report, such as, child molestation or beating, cuts, stabs, shootings, overdose of medications. Obtains receipt for bodies of deceased patients claimed by mortuary and secures autopsy permits from responsible relative.

Performs other related clerical duties: Types, from admission sheet onto index card, name of patient, attending Physician, room number, and date of admission and files card in admission card file, to establish record of assigned and vacant rooms. Routes admission sheet to billing office, and charts of patient to medical library, for future reference. Upon Discharge of patient,

obtains admission sheet from billing office and types date of patients discharge and future appointments, contacts family or ambulance service to take patient home, if patient's not ambulatory. Routes bill to billing department for final payment. Operates PBX to relieve regular operator during busy period. Performs any other clerical duties assigned.

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GPO 923-036

February 1967 S-393

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Admits patient: Greets and puts patient at ease. Takes patient's temperature, pulse, and respiration, as required. Administers first aid if patient's condition requires immediate treatment. Escorts patient, relative or friend to admitting office and seats at desk. Interviews patient to obtain identifying information, such as, name, address, age, occupation, race, health plan name and number and simultaneously types information on admission sheet. Accepts initial payment in absence of health plan or insurance coverage. Obtains signature on admission sheet, of individual responsible for payment of bill. Operates cash register and gives change. Receives valuables from patient and issues receipt. Places patient's valuables in safe until discharged or requested. Answers questions of patient, relatives or friends regarding visitors and visiting hours. Gives information to relative, patient or friend regarding charges, rates, discounts, billing, and other services offered. Assigns patient to room or ward, based on nature of illness and type of accommodations requested. Escorts or arranges to have patient escorted to appropriate room. Upon the request of the Physician notifies family when patient is placed on critical list. Answers inquiries of patient's family, friends, insurance companies and other agencies concerning patient's condition, in accordance with hospital regulations governing divulgence of such information. Upon request of Physician contacts police in connection with the admission of patients that requires a police report, such as, child molestation or beating, cuts, stabs, shootings, overdose of medications. Obtains receipt for bodies of deceased patients claimed by mortuary and secures autopsy permits from responsible relative.

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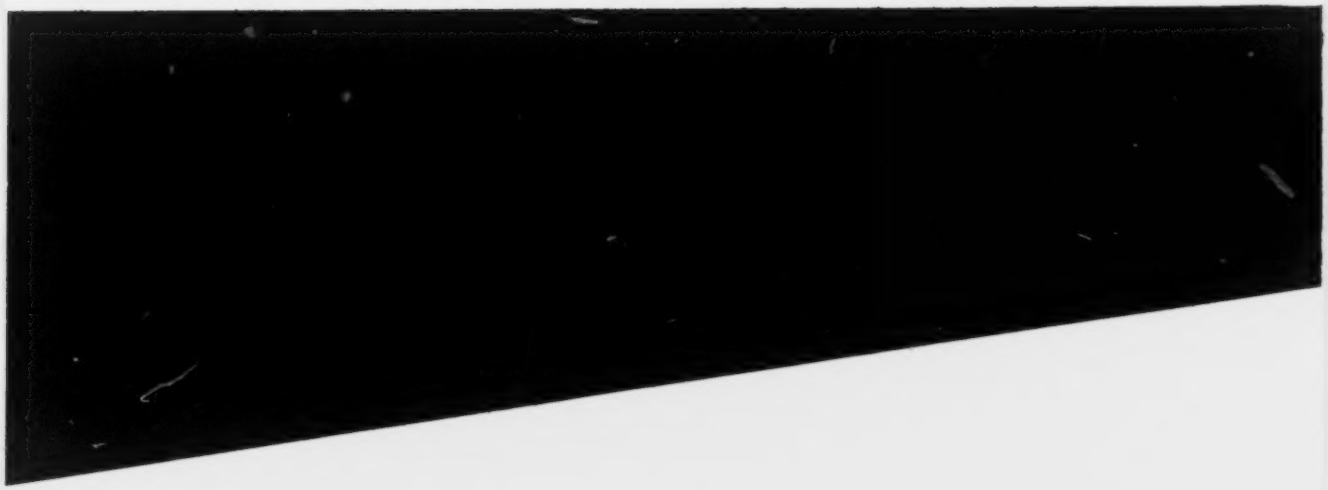

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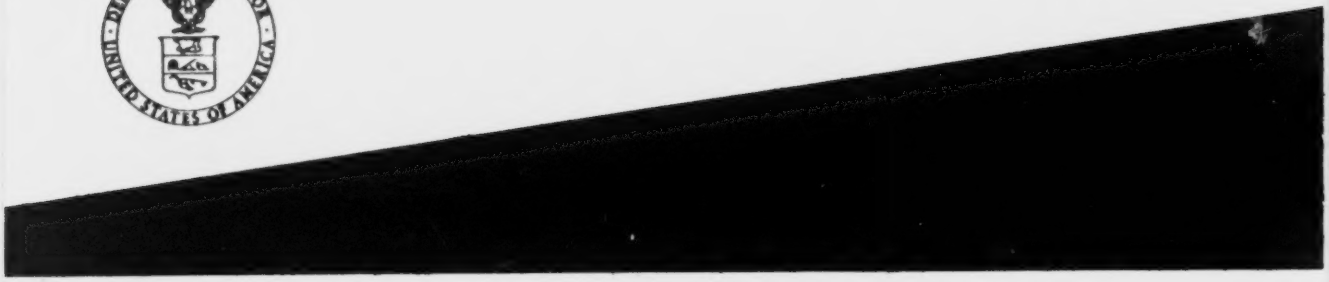

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